

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 2003P01012WO	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/EP2004/050431	International filing date (day/month/year) 02.04.2004	Priority date (day/month/year) 23.04.2003
International Patent Classification (IPC) or national classification and IPC		
Applicant SIEMENS AKTIENGESELLSCHAFT		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. ☒ (sent to the applicant and to the International Bureau) a total of 8 sheets, as follows:

☒ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the report
<input type="checkbox"/>	Box No. II	Priority
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input checked="" type="checkbox"/>	Box No. VII	Certain defects in the international application
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/050431

Box No. I

Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 3-12 _____ as originally filed/furnished
- pages* 1, 2, 2a _____ received by this Authority on 07.02.2005 with letter of 01.02.2005
- pages* _____ received by this Authority on _____
- ☒ the claims:
- nos. _____ as originally filed/furnished
- nos.* _____ as amended (together with any statement) under Article 19
- nos.* 1-8 _____ received by this Authority on 07.02.2005 with letter of 01.02.2005
- nos.* _____ received by this Authority on _____
- ☒ the drawings:
- sheets 1/5, 2/5, 4/5, 5/5 _____ as originally filed/furnished
- sheets* 3/5 _____ received by this Authority on 07.02.2005 with letter of 01.02.2005
- sheets* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/050431

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-8	YES
	Claims		NO
Inventive step (IS)	Claims	1-8	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-8	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

This report makes reference to the following documents cited in the search report:

D1: US-B1-6 430 201 (KONG THOMAS ET AL), 6 August 2002
(2002-08-06)

D2: US-B1-6 359 857 (AHMAD KHALID ET AL), 19 March
2002 (2002-03-19)

1. Explanations

1.1 The present invention is defined by a process (claim 1) for protection switching and monitoring in a data transmission system, in which (i) "the working multiplex signal is subdivided into working path signals and protection path signals", (ii) "the working path signals and protection path signals are supplied to a single switching device, which carries out both multiplex signal protection switching and path protection switching", (iii) "and performance monitoring of the working path signals and protection path signals is carried out", (iv) "in such a way that performance values are accumulated and a resultant performance value

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
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is determined". Claim 7 defines a device for protection switching and monitoring in a data transmission system, the device containing features (i)'-(iv)', which correspond to the process features (i)-(iv).

1.2 The closest prior art is US-B-64302011 (D1), which discloses a process for protection switching and monitoring in a data transmission system, in which process a working multiplex signal is transmitted over a working link and a protection multiplex signal is transmitted over a protection link between network elements, and multiplex signal protection switching is carried out between these multiplex signals at the receiver, and/or path protection switching is carried out between the path signals contained therein at the receiver.

1.3 The process as per claim 1 and the device as per claim 7 differ from the disclosure of D1 exclusively by the features (ii)-(iv) and (ii)'-(iv)', respectively.

1.4 The argument in paragraph 1.3 shows that the subject matter of claims 1 and 7 is novel (PCT Article 33(2)).

1.5 The present invention addresses the objective problem of further simplifying the connection structure of working path signals and protection path signals, and of introducing performance monitoring.

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

- 1.6 None of the available citations discloses or suggests further simplifying the connection structure of the working path signals and protection path signals as defined in points (ii) and (ii)', nor introducing performance monitoring as defined in points (iii)-(iv) and (iii)'-(iv)', in order to solve the objective problem.
- 1.7 The arguments in paragraph 1.6 show that the subject matter of claims 1 and 7 involves an inventive step (PCT Article 33(3)).
- 1.8 The process as per claim 1 and the device as per claim 7 can be implemented with any commercially available resources (since they are subjected to non-specific marginal performance conditions) for processing, transferring and storing information, and these claims are therefore industrially applicable (PCT Article 33(4)).
- 1.9 Dependent claims 2-6 and 8 relate to further implementation details of the process as per claim 1 and device as per claim 7, respectively, and are therefore also novel (PCT Article 33(2)), inventive (PCT Article 33(3)) and industrially applicable (PCT Article 33(4)).

Box No. VII **Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:

- 2.1 Pursuant to PCT Rule 5.1(a)(iii), the description should cite document D2 and properly acknowledge the relevant prior art contained therein, since document D2 discloses in the same technical field as the present invention a process for protection switching and monitoring in a data transmission system provided with a warning monitoring system, so that the warning criteria of the selected signal is retransmitted. These features are also contained in dependent claims 5 and 8, and therefore D2 evidently makes a contribution to the prior art relevant to the present application. Consequently, document D2 should be acknowledged in the description of the application.